

REMARKS

Applicant has carefully studied the Office Action of February 22, 2005, and offers the following remarks in response thereto.

Before addressing the rejection based on Chaskar et al., Applicant provides a brief summary of the present invention so that the remarks relating to Chaskar et al. are considered in the proper context. The present invention is designed to reduce unaligned memory accesses within a computational unit such as a receiver. When a packet is being transmitted, it is frequently fragmented. For example, the 340 byte packet 10 of Figure 1 is fragmented into six 50 byte fragments and one 40 byte fragment. These fragments are then received by the buffers of the computational unit. As illustrated in Figure 2, the first 50 byte fragment is put into the memory locations L, L8, etc. of input buffer 32. As is readily seen, at L48, only a portion of the memory location is occupied. This carries over into the packet buffer 33 memory location L48'. The present invention rotates a portion of the end of the second fragment to the front of the second fragment. The rotated portion is of a size equal to the portion of the memory location already occupied by the end of the first fragment. Thus, in the example provided, two bytes are rotated from the end of the second fragment and placed in front of the second fragment.

Claims 1-17 were rejected under 35 U.S.C. § 102(e) as being anticipated by Chaskar et al. (hereinafter "Chaskar"). Applicant respectfully traverses. For the Patent Office to establish anticipation, the Patent Office must show where each and every element of the claim is shown in a single reference. Further, the elements of the reference must be arranged as claimed. MPEP § 2131.

Claim 1 recites "rotating an EOF (end of fragment) portion of a payload of each fragment to before a SOF (start of fragment) portion of the payload of the fragment. . . ." The Patent Office asserts that this element is shown by Chaskar, col. 5, lines 5-15. Applicant traverses this assertion.

Chaskar, col. 5, lines 5-15 states in full:

This way of buffering fragments and request generation, along with the other features of the present invention will be discussed below, ensures that no link is ever starved and that no physical layer buffer ever overflows.

The queue manager 110 processes the requests generated by the physical layer 100 and delivers fragments to the respective links. The ability of the backpressure scheme to keep the links busy at all times depends on the order in which the queue manager 110 processes the pending requests and the speed at

which the fragments are transferred from the packet queue memory to the physical layer.

While this passage does indicate that the packets are fragmented and that they are delivered to the links, there is nothing that indicates that an end of one fragment is rotated to before the front of the same fragment as claimed. There is no rearrangement of the contents of the fragment at all. To this extent, the reference does not show a claim element. Since Chaskar does not show a claim element, claim 1 is not anticipated.

Claims 2-7 depend from claim 1, and are not anticipated at least for the same reason. Applicant requests withdrawal of the § 102 rejection of claims 1-7 at this time.

Claim 8 is analogous to claim 1, albeit in apparatus form. Specifically, claim 8 recites means for rotating an EOF portion of a payload of each fragment to before an SOF portion of the payload of the fragment. As explained above, this element is not taught or suggested by Chaskar. Thus, claim 8 is not anticipated. Applicant requests withdrawal of the § 102 rejection of claim 8 at this time.

Claim 9 recites a packet rotator that rotates an EOF portion of a payload of each fragment to before a SOF portion of the payload of the fragment. This element is analogous to the element of claim 1 already discussed. Thus, as explained above, this element is not taught or suggested by Chaskar. Thus, claim 9 is not anticipated.

Claims 10-15 depend from claim 9, and are not anticipated at least for the same reason. Applicant requests withdrawal of the § 102 rejection of claims 9-15 at this time.

Claim 16 recites "shifting each fragment by an amount. . . the size of the shift being a function of a *sequence number of the fragment*. . ." (emphasis added). The Patent Office asserts that this element is taught by Chaskar, col. 3, lines 52-60. Applicant traverses. Chaskar, col. 3, lines 52-60 state in full:

The use of fragment-based data transactions allows the buffers in the physical layer to be smaller than those needed with packet-based data transactions. Furthermore, the use of small fragments allows for better delay characteristics. For example, a small packet of 40 bytes which fits in one fragment and is intended for one link, need not wait for the complete transfer from the packet queue memory to the physical layer of a large packet, for example-a 9000 byte packet, intended for another link.

While the passage does discuss the delay characteristics that may occur for a 40 byte and 9000 byte packet, there is no sequence number or anything that can be construed to be a sequence

number in the cited passage. Since the cited passage does not teach a claim element, Chaskar does not anticipate claim 16. Claim 17 depends from claim 16, and is not anticipated at least for the same reasons. Applicant requests withdrawal of the § 102 rejection of claims 16 and 17 at this time.

Applicant notes that claims 3 and 12 deserve special mention. Claims 3 and 12 recite a particular formula as to how the EOF portion is rotated. The Patent Office points to a mathematical formula in Chaskar at col. 6, lines 1-13. However, an examination of the respective formulas shows that they are not equivalent. To this extent, the reference does not teach the element recited in these claims, and claims 3 and 12 are independently patentable.

Applicant requests reconsideration of the rejection in light of the remarks presented herein. Chaskar does not teach or suggest the manipulations of the fragments that are claimed herein. Applicant earnestly solicits claim allowance at the Examiner's earliest convenience.

Respectfully submitted,

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